



25x'25

**AMERICA'S
ENERGY FUTURE**

Uniting Leaders for a Common Energy Goal

**Presentation to
Governor's Alternative
Fuels Working Group**

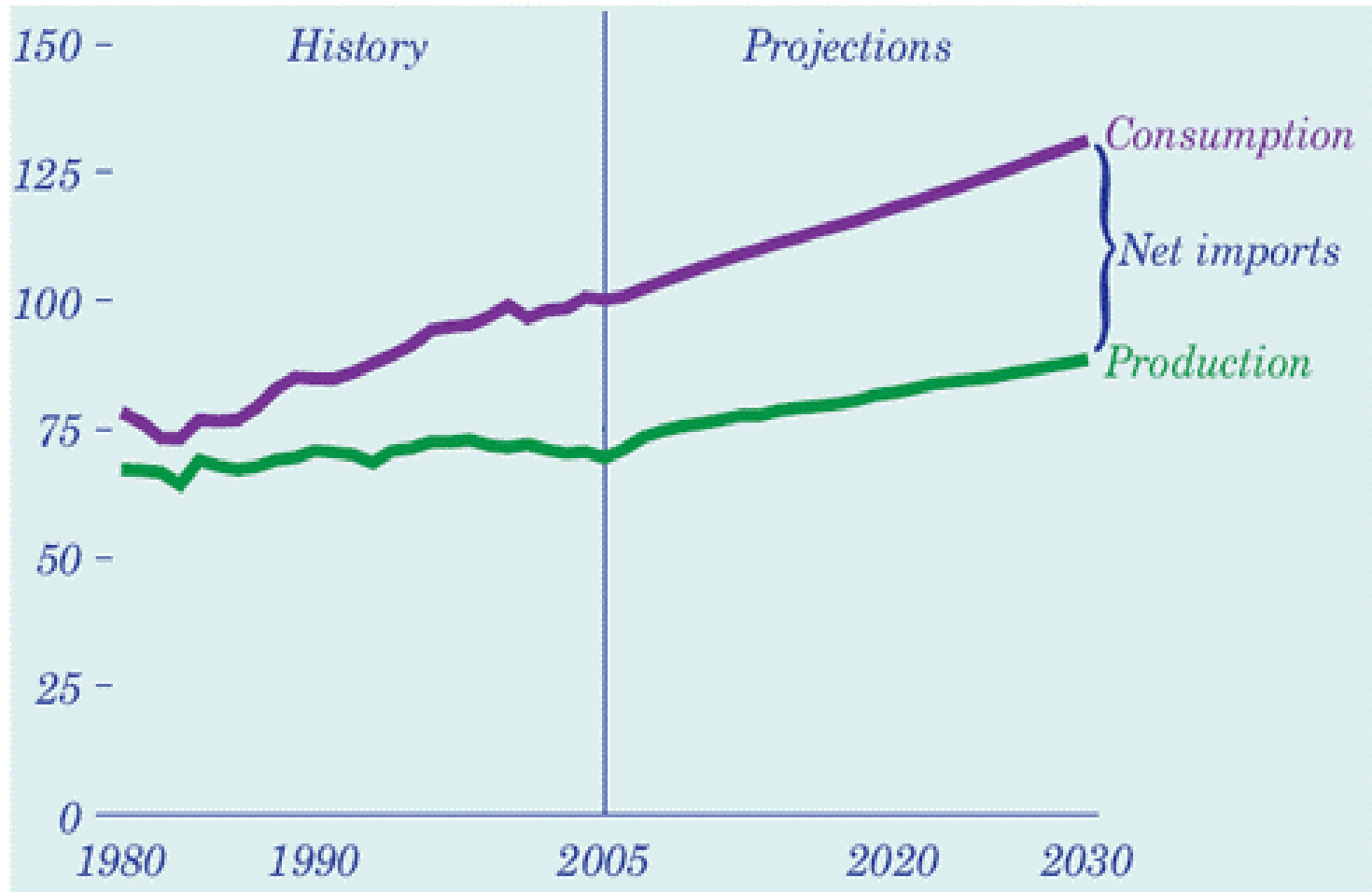
**March 12, 2007
TN Dept. of Environment
and Conservation**

**Brent Bailey
25x'25 State Facilitator**



Energy Use Projections

Figure 6. Total energy production and consumption, 1980-2030 (quadrillion Btu)

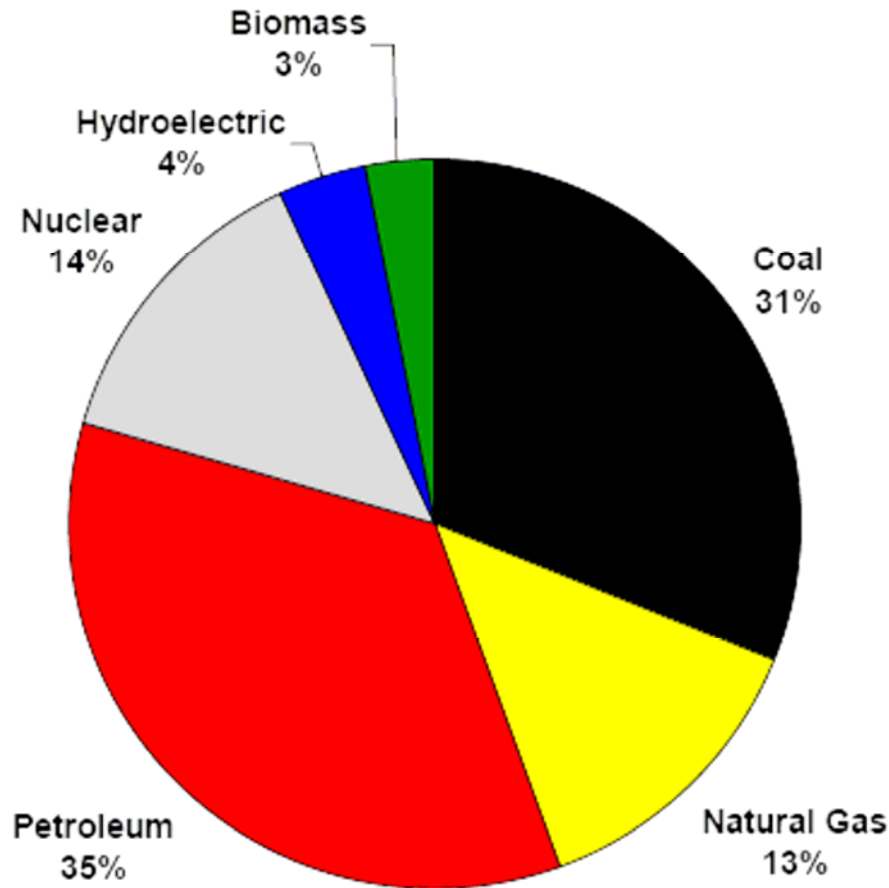


U.S. imports nearly 65% of our petroleum needs; predicted to only increase



Tennessee's Energy Use

Figure 1, Tennessee Energy Consumption by Source, 2002.





Tennessee's Energy Use

- Ranked 16th in the nation for per capita energy use, ranked 15th for total energy consumption, 16th for total petroleum consumption, and despite being ranked 37th for per capita income.
- Large industrial and transportation use; approx. 50% of households have electricity as primary heating source.

Source: EIA



25x'25 Initiative:

- Renewable energy initiative born in the ag and forestry sectors
- Supported by the Energy Future Coalition
- Seeks to forge consensus on a new energy future
- Focuses on economic, national security and environmental benefits



- Formed in Spring 2004
- Organized to explore agriculture and forestry's role in energy production
- Four-phase project
 - create a vision
 - build an energy alliance
 - construct an implementation strategy
 - work to bring the 25x'25 to life



Our Vision:

By the year 2025, America's farms, ranches and forests will provide 25 percent of the total energy consumed in the U.S. while continuing to produce safe, abundant and affordable food, feed and fiber.

25x'25



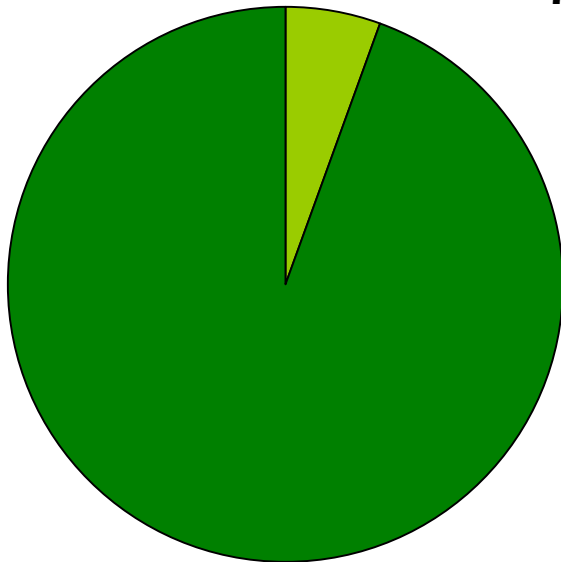
America's Energy Future

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Today (2006)

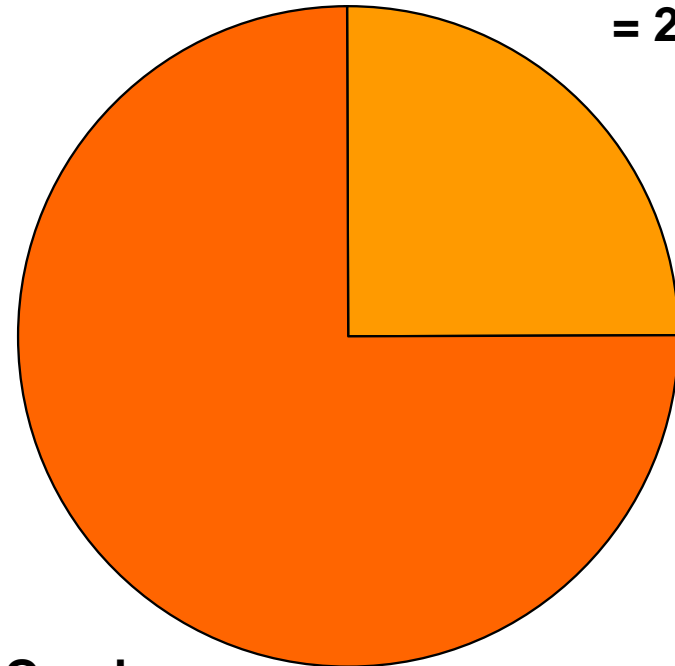
**~7 Quads
Renewable Energy
= 7%**



**100.2 Quads
Total Energy
Consumed**

Goal (2025)

**29.42 Quads
Renewable Energy
= 25%**



**117.7 Quads
Total Energy
Consumed
(RAND Study)**

*EIA predicts
consumption of
127 Quads by 2025*



We will meet this goal by:

- Producing transportation fuels
- Harnessing wind energy
- Converting biogas emissions
- Capturing solar energy
- Providing biomass for generating heat, power, and biofuels
- Observing the secondary benefits to the environment and energy efficiency



America's Energy Future

Over 400 farm, business, energy and environmental organizations!

American Farm Bureau Federation

National Corn Growers Association

American Soybean Association

National Farmers Union

National Education Association

Deere & Company

“Big 3” Automakers – Ford, Daimler Chrysler, GM

American Wind Energy Association

Izaak Walton League of America

Natural Resources Defense Council



America's Energy Future

25x25

TN-based farm, business, energy and environmental organizations

Tennessee Farm Bureau Federation

Milagro Biofuels

East TN Clean Fuels Coalition

Clean Cities of West TN

Bioenergy Engineering, LLC

Many regional partners....



17 Governors

MT	KY	NE	VT	ID
MN	IL	KS	AL	
PA	NM	MI	NH	
IN	WI	CA	VA	

6 Former Governors

FL	MD	ID
IA	NY	OH



4 State Legislatures

Colorado

Nebraska

Vermont

Kansas



State alliance activity:

- Formed in CO, IA, IN, KS, MT, NE, TX, NY, OH, PA and VT
- Forming in AL, CA, FL, GA, ID, LA, ME, MS, OR, and WA
- Action pending in TN, AR, AZ, IL, KY, MI, MN, ND, NM, NV, SD, VA, and WY



Univ. of Tennessee Study Objectives

- Determine the ability of America's farms, forests and ranches to provide 25% of U.S. total energy needs in 2025
- Assess the economic impacts of achieving the 25x'25 goal on the ag sector and the overall economy



Study Results

- America's farms, forests and ranches can play a significant role in meeting the country's energy needs.
- The 25x'25 goal can be met while continuing to provide safe, abundant and affordable food, feed and fiber.



By 2025, America's farms, forests and ranches can annually produce:

- 86 billion gallons of ethanol (Assuming that cellulosic technologies will be available and competitive by 2012)
- 1.1 billion gallons of biodiesel
- 932 billion kwh of electricity
- 15.45 quads of energy from biomass
- While creating 5.1 million new jobs, \$700 billion in economic activity, and reducing CO₂



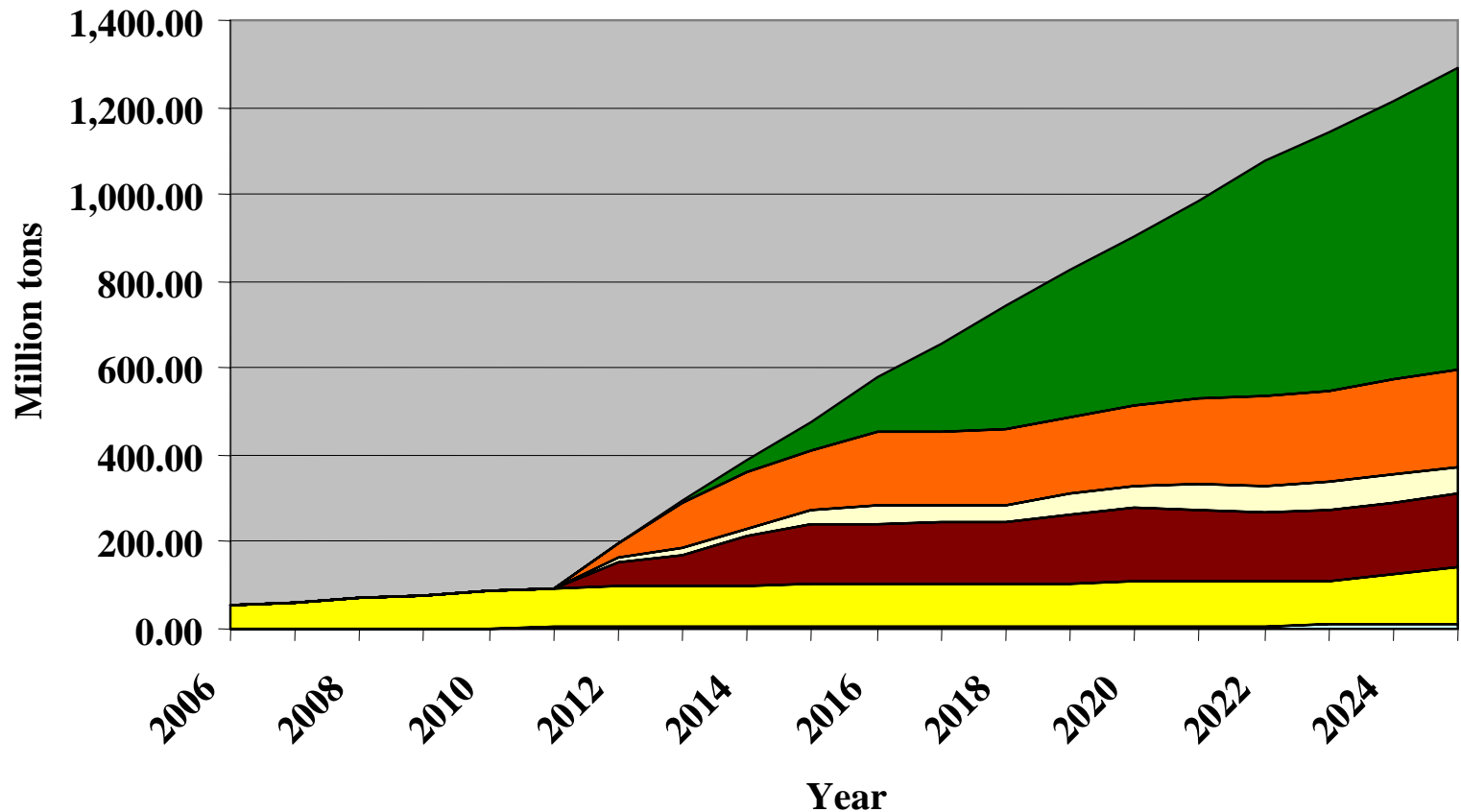
Key to the Future: Cellulosics

- Currently costly for capital investment and conversion process
- No commercial-scale facilities in U.S.
- Tremendous potential for Southeast to be premier feedstock supplier
 - Agriculture residue
 - Dedicated biomass crops
 - Non-commercial hardwoods and forest residues



America's Energy Future

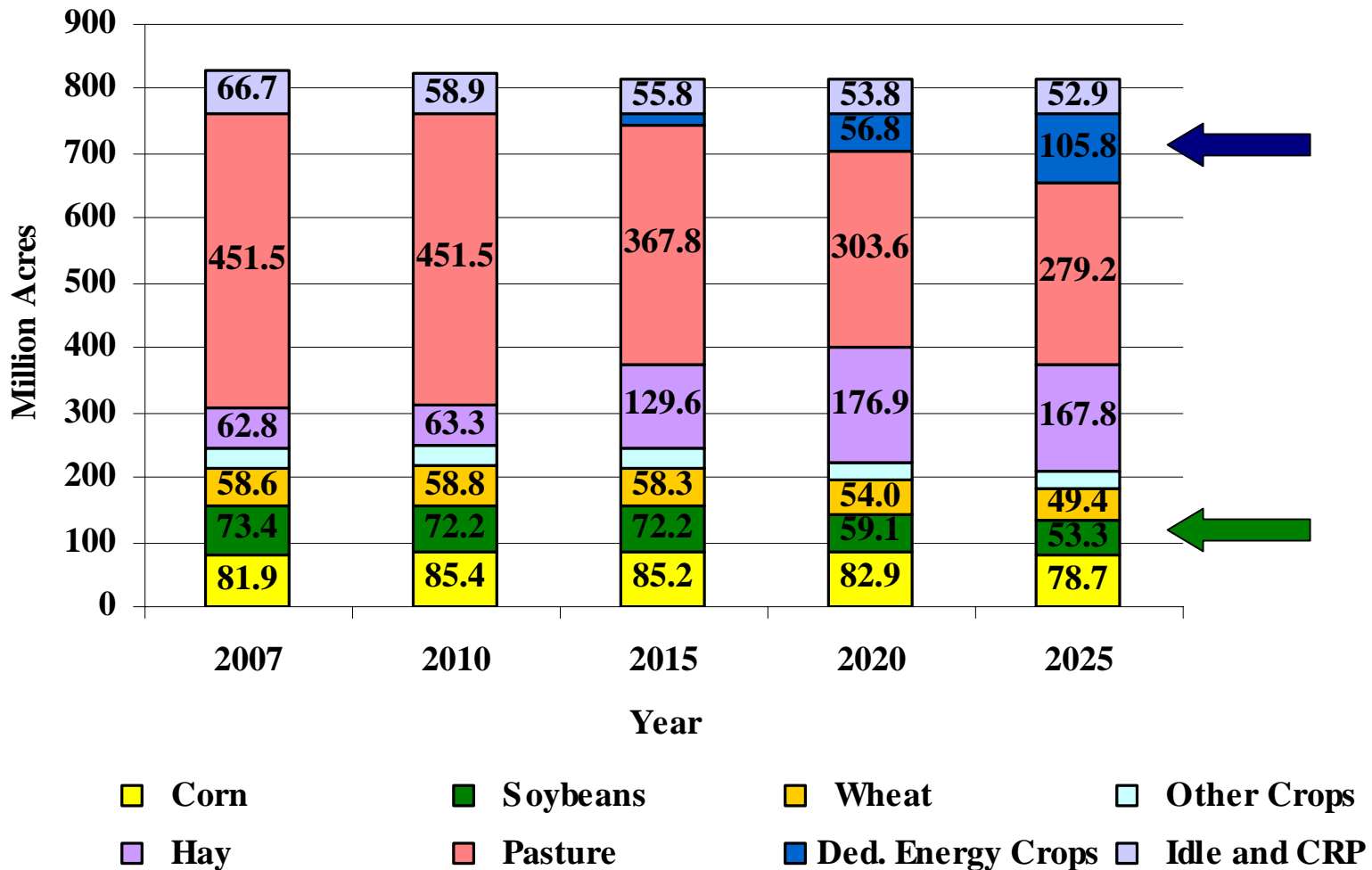
Feedstocks Used to Reach 25x'25



□ Soybeans □ Corn Grain ■ Wood Residue □ Straw ■ Stover ■ Dedicated Energy Crops



Changes in Land Use for Selected Simulated Years under the **AE** Scenario.





2007 objectives:

- Establish 25x'25 as a national goal
- Finalize and advance the AP
- Grow the national and state alliances
- Establish a corporate component of 25x'25
- Build public support for a 25x'25 energy future



National goal:

- June 7, 2006 – Bipartisan group of Senators and Representatives introduced concurrent Congressional resolutions calling for a new national renewable energy goal: 25x'25
109th: 28 Senate; 94 House
- 110th: SCR 3 has 25 co-sponsors; HCR 25 has 47 co-sponsors (Rep. Wamp is an original co-sponsor)



Implementation strategy:

- Process began in July 2006
- Guided by “yes—if” principle
- “Whats” and “hows” to get to 25x'25
- 25x'25 Action Plan: Charting America's Energy Future- released Feb. 28th



35 Recommendations - Five Areas of Focus

- Improving Energy Efficiency and Productivity (option of first choice)
- Increasing Renewable Energy Production
- Delivering Energy to Markets
- Expanding Renewable Energy Markets
- Strengthening Conservation of Natural Resources and the Environment



Action Plan calls for:

- Increased funding for RDD&D
- Expansion of current production incentives
- New Feedstock Residue Management Program
- Exploring a permanent counter-cyclical incentive system for biofuels in relation to oil
- Incentives to build new transmission lines
- Mechanism to get to 50% flex-fuel vehicles
- Expanding conservation and energy programs in the Farm Bill



25x'25 Action Plan will:

- Correct energy market rules and prices
- Generate \$700 billion in economic activity annually
- Create 4-5 million jobs
- Reduce carbon dioxide emissions by one billion tons annually

All for only an investment equal to 5 % of what America spent on imported oil in 2006.



The 25x'25 Vision:

- Is achievable
- Provides a positive impact on the national and rural economies
- Reduces our reliance on foreign oil and improves national security
- Creates important environmental benefits



Environmental Benefits

- Air Quality: reduce CO, CO₂, PM, and toxics such as NO_x, SO_x, and mercury
- Climate Change?: slow/halt/reverse
- Land Use: Shift from management intensive crops to perennial natives? Let the market determine land use.....
- Enhanced land values
- Habitats improve as a result of better land management



We Need Your:

- Involvement
- Insight
- Expertise
- Leadership skills



We invite Tennessee to endorse the vision and join us in promoting a new strategy for a renewable energy future.



25x'25 Vision Complements Tennessee's Recent Activities

- Interagency Alt. Fuels Work Group
- New Production and Processing Incentives
- UT's TN Biofuels Initiative
- Pilot Cellulosic Ethanol Facility (\$40M)
- Potential DOE Bioenergy Center at ORNL
- New production and processing incentives
- Governor's Alt Fuels Conference (May 2007)



“America must act now to reduce dependence on foreign sources of energy. The sooner breakthroughs are achieved, the better for America.” – Pres. Bush

“Change is the law of life, and those who look only to the past or the present are certain to miss the future.” – J.F. Kennedy

This could be America's next “Manhattan Project”



America's Energy Future

**Please join us in bringing the
vision of 25x'25 to life.**



25x'25

**AMERICA'S
ENERGY FUTURE**

www.25x25.org